

FACILITY NAME AND PERMIT NUMBER:

Aquia Wastewater Treatment Facility 606968

Form Approved 1/14/99
OMB Number 2040-0086**FORM
2A
NPDES****NPDES FORM 2A APPLICATION OVERVIEW****APPLICATION OVERVIEW**

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

- A. Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. Additional Application Information for Applicants with a Design Flow \geq 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

- D. Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
1. Has a design flow rate greater than or equal to 1 mgd,
 2. Is required to have a pretreatment program (or has one in place), or
 3. Is otherwise required by the permitting authority to provide the information.
- E. Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
1. Has a design flow rate greater than or equal to 1 mgd,
 2. Is required to have a pretreatment program (or has one in place), or
 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
 2. Any other industrial user that:
 - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
 - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
 - c. Is designated as an SIU by the control authority.
- G. Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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BASIC APPLICATION INFORMATION**PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:**

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name Aquia Wastewater Treatment Facility

Mailing Address P.O. Box 339 Stafford, VA 22555

Contact person Harry Critzer Director of Utilities

Title Director

Telephone number (540) 658-8630

Facility Address 75 Coal Landing Road Stafford VA 22555
(not P.O. Box)

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name Stafford County Board of Supervisors

Mailing Address P.O. Box 339

Contact person Harry Critzer

Title Director of Utilities

Telephone number (540) 658-8630

Is the applicant the owner or operator (or both) of the treatment works?☒ owner ☐ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☒ facility ☐ applicant**A.3. Existing Environmental Permits.** Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES 0060968 PSD _____

UIC _____ Other _____

RCRA _____ Other _____

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Stafford County</u>	<u>60000</u>	<u>Separate</u>	<u>Municipal</u>
<u>Camp Barrett</u>	<u>5000</u>	<u>Separate</u>	<u>Federal</u>
_____	_____	_____	_____
Total population served <u>65000</u>			

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A.5. Indian Country.

- a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

- b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

☐ Yes ☒ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

- a. Design flow rate
- 10
- mgd

	<u>Two Years Ago</u>	<u>Last Year</u>	<u>This Year</u>
b. Annual average daily flow rate	<u>5.27</u>	<u>5.00</u>	<u>4.54</u> mgd
c. Maximum daily flow rate	<u>7.20</u>	<u>6.96</u>	<u>5.73</u> mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

☒ Separate sanitary sewer 100 %
☐ Combined storm and sanitary sewer _____ %

A.8. Discharges and Other Disposal Methods.

- a. Does the treatment works discharge effluent to waters of the U.S.?
- ☒
- Yes
- ☐
- No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1
ii. Discharges of untreated or partially treated effluent 0
iii. Combined sewer overflow points 0
iv. Constructed emergency overflows (prior to the headworks) 0
v. Other 0

- b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.?
- ☐
- Yes
- ☒
- No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge _____ continuous or _____ intermittent?

- c. Does the treatment works land-apply treated wastewater?
- ☐
- Yes
- ☒
- No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

- d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works?
- ☐
- Yes
- ☒
- No

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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

For each treatment works that receives this discharge, provide the following:

Name: _____

Mailing Address: _____

Contact person: _____

Title: _____

Telephone number: _____

If known, provide the NPDES permit number of the treatment works that receives this discharge. _____

Provide the average daily flow rate from the treatment works into the receiving facility. _____

mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)?

_____ Yes

_____ ☒ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: _____

Is disposal through this method _____ continuous or _____ intermittent?

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WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

- a. Outfall number 001
- b. Location 22555
(City or town, if applicable) (Zip Code)
Stafford Virginia
(County) (State)
38-26-50 77-23-43
(Latitude) (Longitude)
- c. Distance from shore (if applicable) N/A ft.
- d. Depth below surface (if applicable) N/A ft.
- e. Average daily flow rate 4.54 mgd
- f. Does this outfall have either an intermittent or a periodic discharge? Yes ☒ No (go to A.9.g.)
- If yes, provide the following information:
- Number of times per year discharge occurs: _____
- Average duration of each discharge: _____
- Average flow per discharge: _____ mgd
- Months in which discharge occurs: _____
- g. Is outfall equipped with a diffuser? Yes ☒ No

A.10. Description of Receiving Waters.

- a. Name of receiving water Austin Run, UT
- b. Name of watershed (if known) _____
- United States Soil Conservation Service 14-digit watershed code (if known): _____
- c. Name of State Management/River Basin (if known): Potomac
- United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____
- d. Critical low flow of receiving stream (if applicable):
acute _____ cfs chronic _____ cfs
- e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of CaCO₃

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A.11. Description of Treatment.

- a. What levels of treatment are provided? Check all that apply.

☐ Primary☒ Secondary☒ Advanced☐ Other. Describe: _____

- b. Indicate the following removal rates (as applicable):

Design BOD₅ removal or Design CBOD₅ removal 99.9 %Design SS removal 99.8 %Design P removal 99.2 %Design N removal 96.6 %

Other _____ %

- c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

U.V.

If disinfection is by chlorination, is dechlorination used for this outfall?

☐ Yes☐ No

- d. Does the treatment plant have post aeration?

☐ Yes☒ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.5	s.u.			
pH (Maximum)	8.1	s.u.			
Flow Rate	8.5	MGD	4.8	MGD	365
Temperature (Winter)	2.0	Degrees C	14	Degrees C	120
Temperature (Summer)	27	Degrees C	25	Degrees C	122

* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5							
	CBOD-5	0	mg/l	0	mg/l	365	SM5210B	5
FECAL COLIFORM		8	MPN	1	MPN/Cml	365	SM9223B	1
TOTAL SUSPENDED SOLIDS (TSS)		3.5	mg/l	<QL	mg/l	365	SM2540B	1

END OF PART A.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

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OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).**All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.52055 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

On going collection system survey to identify sources of I&I-Improving-improved construction standards minimize**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.**B.4. Operation/Maintenance Performed by Contractor(s).**Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☒ Yes ☐ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: Agri-ServicesMailing Address: P.O. Box 161 Sealston, VATelephone Number: (540) 775-2266Responsibilities of Contractor: Transport Dewatered Sludge to the Landfill-To Land If Needed**B.5. Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

- Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

☐ Yes ☐ No

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- c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

- d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM / DD / YYYY	MM / DD / YYYY
- Begin construction	___/___/___	___/___/___
- End construction	___/___/___	___/___/___
- Begin discharge	___/___/___	___/___/___
- Attain operational level	___/___/___	___/___/___

- e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: _____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	1.39	mg/l	<0.2-QL	mg/l	365	SM4500	0.2
CHLORINE (TOTAL RESIDUAL, TRC)	n/a-use U.V.						
DISSOLVED OXYGEN	15.9	mg/l	9.5	mg/l	365	SM4500-06	0.1
TOTAL KJELDAHL NITROGEN (TKN)	5.0	mg/l	0.85	mg/l	52	SM4500-org C	0.5
NITRATE PLUS NITRITE NITROGEN	3.33	mg/l	0.64	mg/l	52	SM4500N03 E	0.5
OIL and GREASE	<5.0	mg/l	<5.0	mg/l	3	1664A	5
PHOSPHORUS (Total)	0.32	MG/L	0.11	mg/l	365	SM4500 P.E.	0.1
TOTAL DISSOLVED SOLIDS (TDS)	295	mg/l	274	mg/l	3	SM2540C	1.0
OTHER							

END OF PART B.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

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OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:☒ Basic Application Information packet

Supplemental Application Information packet:

☒ Part D (Expanded Effluent Testing Data)☒ Part E (Toxicity Testing: Biomonitoring Data)☒ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)☐ Part G (Combined Sewer Systems)**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Anthony Romanello, County AdministratorSignature Telephone number (540) 658-4541Date signed 2.7.13

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

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SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY					<20	ug/l	<0.03	KG	3	EPA 200.8	20
ARSENIC					<20	ug/l	<0.03	KG	3	EPA 200.8	20
BERYLLIUM					<1.0	ug/l	<0.01	KG	3	EPA 200.8	1.0
CADMIUM					<0.1	ug/l	<.001	KG	3	EPA 200.8	0.1
CHROMIUM					<5.0	ug/l	<.001	KG	3	EPA 200.8	5.0
COPPER					<1.0	ug/l	<.001	KG	3	EPA 200.8	1.0
LEAD					<1.0	ug/l	<.001	KG	3	EPA 200.8	1.0
MERCURY					<10.0	ug/l	<.001	KG	3	EPA 245.7	10.0
NICKEL					<2.0	ug/l	<.001	KG	3	EPA 200.8	2.00
SELENIUM					<2.0	ug/l	<.001	KG	3	EPA 200.8	2.00
SILVER					<0.10	ug/l	<.001	KG	3	EPA 200.8	0.1
THALLIUM					<0.10	ug/l	<.001	KG	3	EPA 200.8	0.1
ZINC					29.5	ug/l	<.001	KG	3	EPA 200.8	0.1
CYANIDE					<10.0	ug/l	<.001	KG	3	ASTM D4282	10
TOTAL PHENOLIC COMPOUNDS					0.05	ug/l	<.001	KG	3	LACH 10-210	0.05
HARDNESS (AS CaCO ₃)					95.1	mgeq	1694	KG	3	SM2340B	1.2
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

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POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
ACRYLONITRILE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
BENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
BROMOFORM					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
CARBON TETRACHLORIDE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
CLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
CHLORODIBROMO-METHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
CHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
2-CHLORO-ETHYLVINYL ETHER					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
CHLOROFORM					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
DICHLOROBROMO-METHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,1-DICHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,2-DICHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
TRANS-1,2-DICHLORO-ETHYLENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,1-DICHLOROETHYLENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,2-DICHLOROPROPANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,3-DICHLORO-PROPYLENE					<20.0	ug/l	<.001	KG	3	EPA 624	20.0
ETHYLBENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
METHYL BROMIDE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
METHYL CHLORIDE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
METHYLENE CHLORIDE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,1,2,2-TETRACHLORO-ETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
TETRACHLORO-ETHYLENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
TOLUENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0

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POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,1,2-TRICHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
TRICHLORETHYLENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
VINYL CHLORIDE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

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ACID-EXTRACTABLE COMPOUNDS

P-CHLORO-M-CRESOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2-CHLOROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2,4-DICHLOROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2,4-DIMETHYLPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
4,6-DINITRO-O-CRESOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2,4-DINITROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2-NITROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
4-NITROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
PENTACHLOROPHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
PHENOL					<10.0	ug/l	<.001	KG	3	EPA 625	
2,4,6-TRICHLOROPHENOL					<10	ug/l	<.001	KG	3	EPA 625	

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

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BASE-NEUTRAL COMPOUNDS.

ACENAPHTHENE					<10.0	ug/l	<.001	KG	3	EPA 625	
ACENAPHTHYLENE					<10.0	ug/l	<.001	KG	3	EPA 625	
ANTHRACENE					<10.0	ug/l	<.001	KG	3	EPA 625	
BENZIDINE					<10.0	ug/l	<.001	KG	3	EPA 625	
BENZO(A)ANTHRACENE					<10.0	ug/l	<.001	KG	3	EPA 625	
BENZO(A)PYRENE					<10	ug/l	<.001	KG	3	EPA 625	

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Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BENZO(GHI)PERYLENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BENZO(K)FLUORANTHENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BIS (2-CHLOROETHOXY) METHANE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BIS (2-CHLOROETHYL)-ETHER					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BIS (2-CHLOROISO-PROPYL) ETHER					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BIS (2-ETHYLHEXYL) PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
4-BROMOPHENYL PHENYL ETHER					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
BUTYL BENZYL PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
2-CHLORONAPHTHALENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
4-CHLORPHENYL PHENYL ETHER					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
CHRYSENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
DI-N-BUTYL PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
DI-N-OCTYL PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
DIBENZO(A,H) ANTHRACENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
1,2-DICHLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,3-DICHLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
1,4-DICHLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 624	10.0
3,3-DICHLOROBENZIDINE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
DIETHYL PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
DIMETHYL PHTHALATE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
2,4-DINITROTOLUENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
2,6-DINITROTOLUENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
1,2-DIPHENYLHYDRAZINE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0

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Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
FLUORENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
HEXACHLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
HEXACHLOROBUTADIENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
HEXACHLOROCYCLO-PENTADIENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
HEXACHLOROETHANE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
INDENO(1,2,3-CD)PYRENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
ISOPHORONE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
NAPHTHALENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
NITROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
N-NITROSODI-N-PROPYLAMINE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
N-NITROSODI- METHYLAMINE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
N-NITROSODI-PHENYLAMINE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
PHENANTHRENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
PYRENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0
1,2,4-TRICHLOROBENZENE					<10.0	ug/l	<.001	KG	3	EPA 625	10.0

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:

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SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

☒ chronic ☐ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: _____ Test number: _____ Test number: _____

a. Test information.

Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			

b. Give toxicity test methods followed.

Manual title			
Edition number and year of publication			
Page number(s)			

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite			
Grab			

d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection			
After dechlorination			

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Test number: _____

Test number: _____

Test number: _____

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity

Acute toxicity

g. Provide the type of test performed.

Static

Static-renewal

Flow-through

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water

Receiving water

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water

Salt water

j. Give the percentage effluent used for all concentrations in the test series.

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH

Salinity

Temperature

Ammonia

Dissolved oxygen

l. Test Results.

Acute:

Percent survival in 100%
effluent

%

%

%

LC₅₀

95% C.I.

%

%

%

Control percent survival

%

%

%

Other (describe)

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Chronic:

NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.

Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____ Yes ____ No If yes, describe: _____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: 05/14/2012 (MM/DD/YYYY)

Summary of results: (see instructions)

passed the existing permit requirement with: Chronic P.promelas toxicity test NOEC=100% effluent (TUc=1) and Chronic C.dubia toxicity test NOEC=100% effluent (TUc=1)

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

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SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

☒ Yes ☐ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 1b. Number of CIUs. 1

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Marine Corps Base QuanticoMailing Address: 3250 Catlin Ave Quantico, Virginia 22134-5001

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Bluing/Parkerizing

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): No effectRaw material(s): No effect

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

50,000 gpd (☐ continuous or ☒ intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

125,000 gpd (☒ continuous or ☐ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ☒ Yes ☐ Nob. Categorical pretreatment standards ☐ Yes ☐ No

If subject to categorical pretreatment standards, which category and subcategory?

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F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

☐ Yes ☒ No

If yes, describe each episode.

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ☐ Yes ☒ No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

☐ Truck☐ Rail☐ Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste NumberAmountUnits

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

☐ Yes (complete F.13 through F.15.)☒ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes ☐ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous☐ Intermittent

If intermittent, describe discharge schedule.

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

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OMB Number 2040-0086**SUPPLEMENTAL APPLICATION INFORMATION****PART G. COMBINED SEWER SYSTEMS**

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

- All CSO discharge points.
- Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).
- Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

- Locations of major sewer trunk lines, both combined and separate sanitary.
- Locations of points where separate sanitary sewers feed into the combined sewer system.
- Locations of in-line and off-line storage structures.
- Locations of flow-regulating devices.
- Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

- Outfall number _____
- Location
(City or town, if applicable) _____ (Zip Code) _____
(County) _____ (State) _____
(Latitude) _____ (Longitude) _____
- Distance from shore (if applicable) _____ ft.
- Depth below surface (if applicable) _____ ft.
- Which of the following were monitored during the last year for this CSO?
____ Rainfall ____ CSO pollutant concentrations ____ CSO frequency
____ CSO flow volume ____ Receiving water quality
- How many storm events were monitored during the last year? _____

G.4. CSO Events.

- Give the number of CSO events in the last year.
_____ events (____ actual or ____ approx.)
- Give the average duration per CSO event.
_____ hours (____ actual or ____ approx.)

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- c. Give the average volume per CSO event.

_____ million gallons (_____ actual or _____ approx.)

- d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

- a. Name of receiving water: _____

- b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

- c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

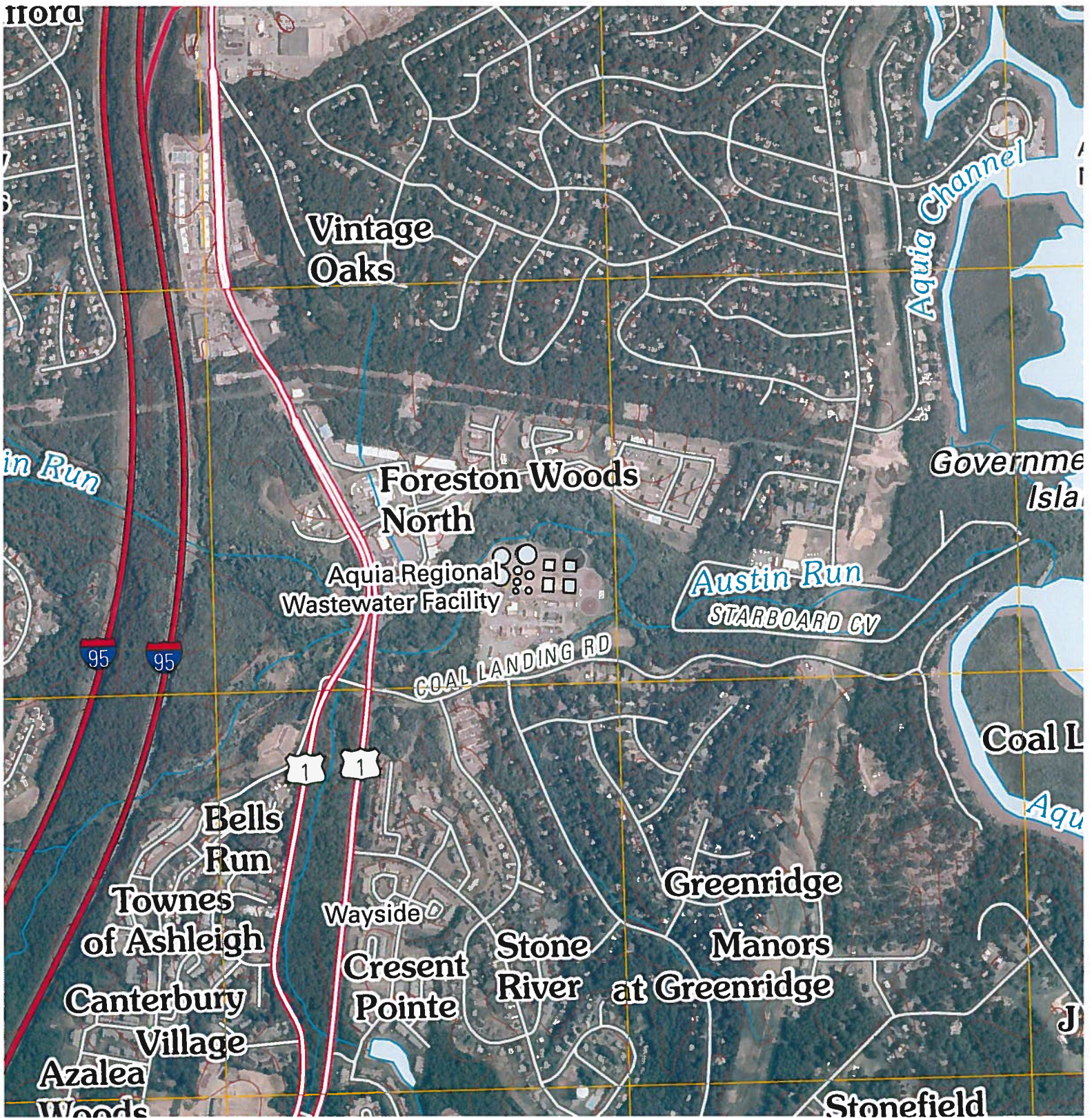
G.6. CSO Operations.

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

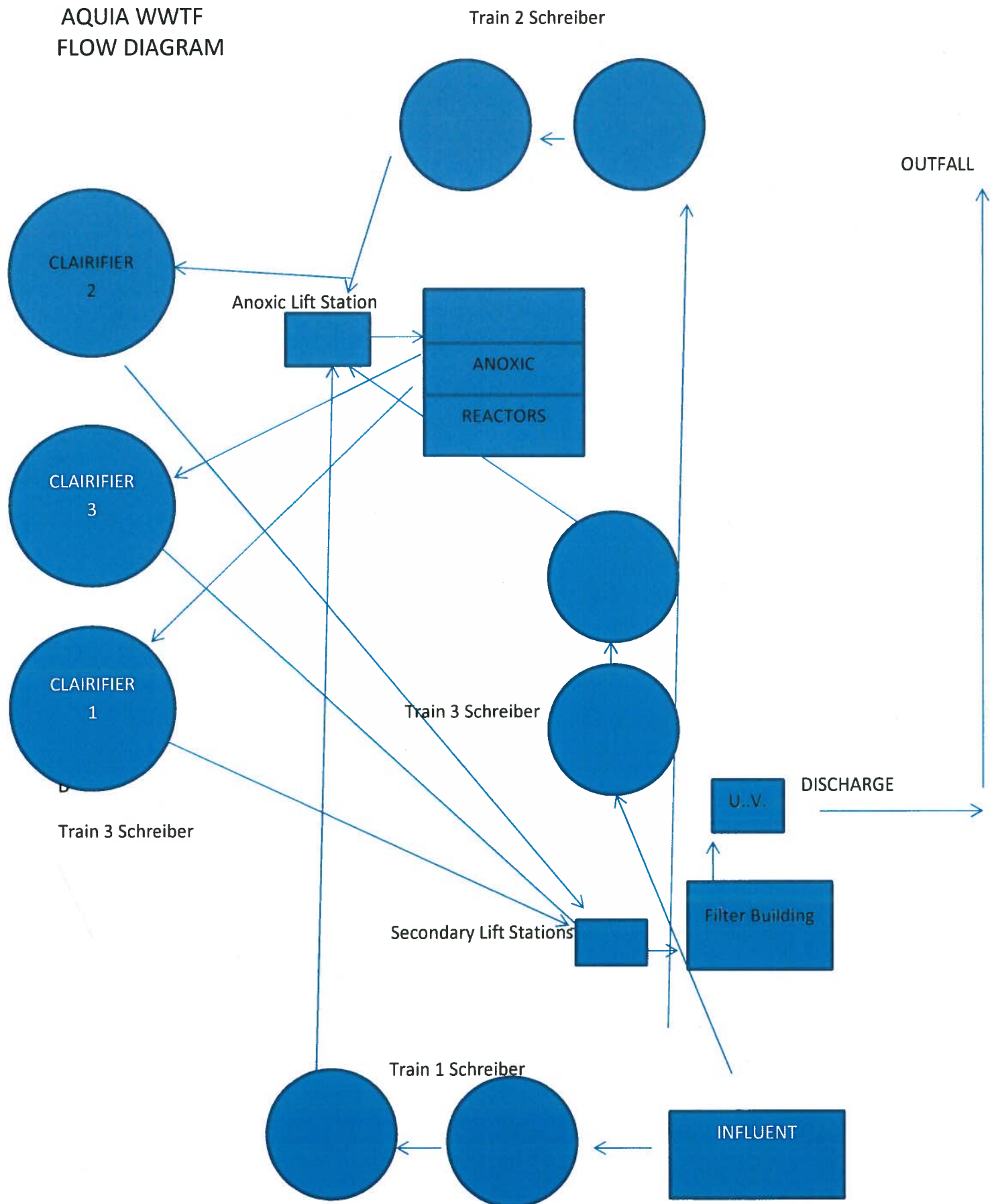
END OF PART G.

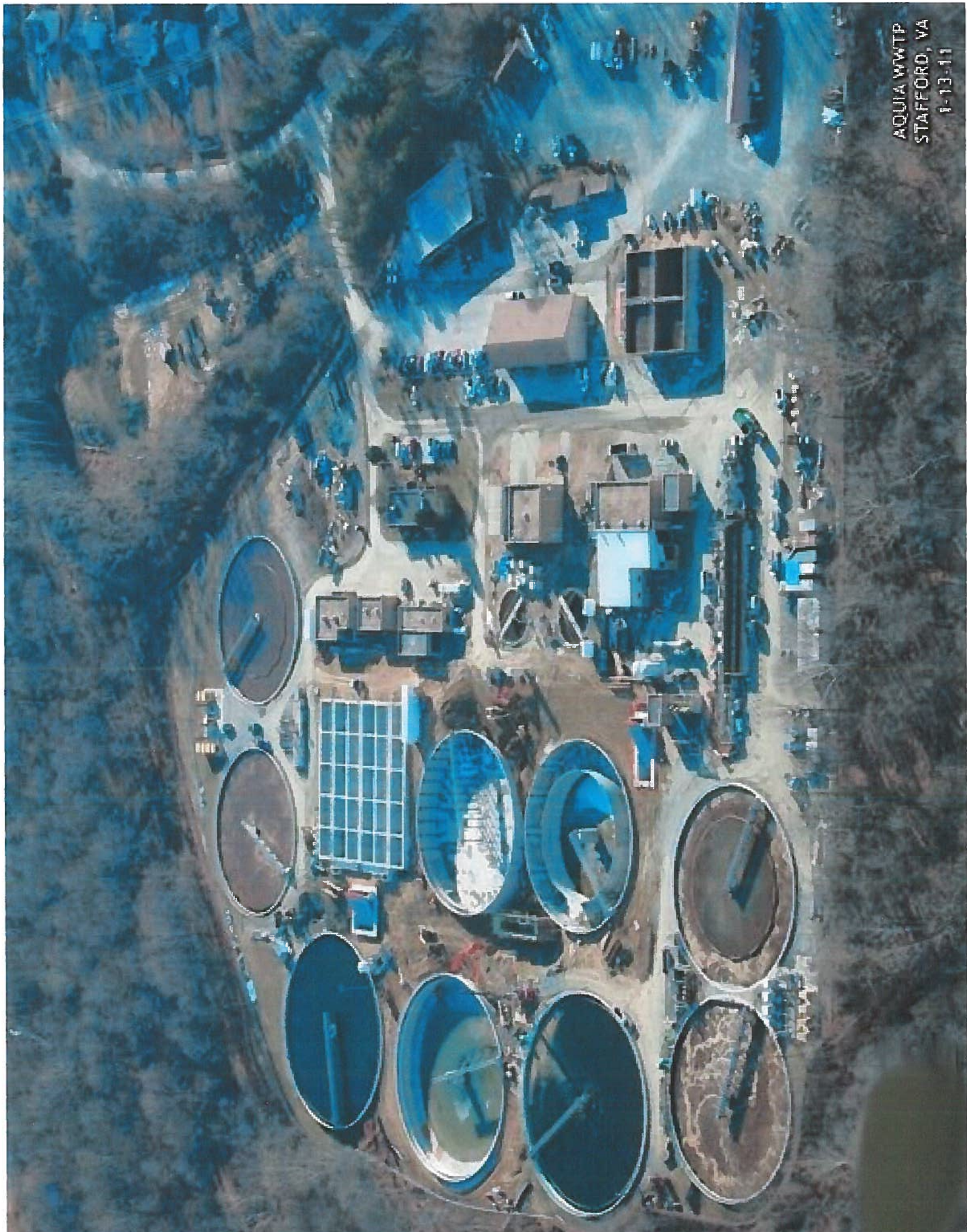
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

Additional information, if provided, will appear on the following pages.



AQUIA WWTF FLOW DIAGRAM





AQUIA WWTP
STAFFORD, VA
1-13-11